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EXAMINER

HASTINGS, KAREN M

ART UNIT

PAPER NUMBER

1731

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/902,975	Doe/le
Examiner	HASTINGS	Group Art Unit
		1731

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

**Status**

- Responsive to communication(s) filed on 7/01
- This action is **FINAL**.
- Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

**Disposition of Claims**

- Claim(s) 1-21 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- Claim(s) \_\_\_\_\_ is/are allowed.
- Claim(s) 1-21 is/are rejected.
- Claim(s) \_\_\_\_\_ is/are objected to.
- Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

**Application Papers**

- See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.
- The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119 (a)-(d)**

- Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- All  Some\*  None of the CERTIFIED copies of the priority documents have been received.
- received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
- received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

**Attachment(s)**

- Information Disclosure Statement(s), PTO-1449, Paper No(s). 2  Interview Summary, PTO-413
- Notice of Reference(s) Cited, PTO-892  Notice of Informal Patent Application, PTO-152
- Notice of Draftsperson's Patent Drawing Review, PTO-948  Other \_\_\_\_\_

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**Informalities:** The specification at page 5 line 3 refers to "distribution cross 15", yet there is no numeral 15 on the Figures. It appears such should be added to Figure 2 in an appropriate location. Also on page 5 line 16 reference is made to "disk 50" and page 6 line 10 refers to "control valve 50". Correction is necessary.

**Claims 9 and 12-21 are rejected under 35 U.S.C. § 112, second paragraph,** as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 9 the reference to "carbon dioxide" is confusing since the presence of carbon dioxide has not previously been recited.

Claims 12 and 14 are inconsistent with one another in that claim 12 recites on lines 4 and 5 that there are four paddles, yet claim 14 recites two to eight paddles. Correction is necessary.

Claim 19 - there is no antecedent basis for "said carbon dioxide supply".

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claims 1-10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kriebel et al '865.***

Kriebel et al. at Figure 8 and relevant description teaches all the claimed apparatus features - note a teeth ring at 22, input shaft 16 with wing shaped or cross-shaped strips 17 that serve to distribute the pulp flow (note column 6 lines 4-15), gas ring/vapor chamber 18, rotor 16 and stator 15. A reactant gas supply (e.g. of steam) is provided via a plurality of vapor lines 5'.

Any differences that may be gleaned from the current claim language would have been prima facie obvious to one of ordinary

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skill in the art - for example only, it appears that the wing shaped strips 17 which serve to distribute the pulp through the teeth 22 into the ring shaped vapor space 18 could be viewed as "radially extending paddles" of claim 4; but in any event, the use of paddles to distribute the material would have been a prima facie obvious well known distributor design as even exemplified by paddles 10 on Figure 5 of Kriebel et al. Also the use of a control valve (claim 9) to control the amount of gas supplied would have been immediately envisioned to one of ordinary skill in the art as it was invariably necessary to provide a control valve to be able to turn on and off the supply of materials to a device.

**Claims 4 and 12-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kriebel et al. '865 with Berggren.**

Kriebel et al. is applied as set forth above to show as apparatus with a toothed ring, a gas ring, distribution strips or wings 17, a rotor and stator as claimed. Kriebel et al. fails to explicitly show a distribution cross with four radially extending paddles as set forth in claim 12. However Kriebel et al. does teach that pulverizing members 17 may be wing shaped or cross shaped strips that serve to distribute the material.

Furthermore Berggren is cited as it exemplifies it is well known to supply a propeller-like means 9 on the rotatable input

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shaft in order to degrade and distribute the incoming material in a similar apparatus; see column 3 lines 43-50.

Thus clearly it would have been prima facie obvious to one of ordinary skill in the art to have used any appropriate distribution cross design including one with paddles since this is just another alternative design choice to a propeller-like means if indeed ~~paddles~~ does not encompass a propeller-like means.

All dependent claims are either exemplified by the references or are well known technical features to one of ordinary skill in the art.

**Claims 1-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kriebel et al. as necessary with Berggren, further as necessary with Klungness et al.**

Kriebel and Berggren are applied as above. Note as these are apparatus claims the phrase "for loading fibers in a fiber suspension with calcium carbonate" does not further limit the apparatus, it is merely an intended use of the apparatus. But in any event in order to be complete, the Examiner applies Klungness et al. to all the claims. Klungness teaches that in order to load fibers with calcium carbonate, it is appropriate to use any high shear mixing device (see column 7 lines 5-25). In particular,

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Klungness et al. teaches that a pressurized refiner may be used and that carbon dioxide gas is an appropriate reactant gas.

Thus it would have been prima facie obvious to one of ordinary skill in the art to use any known refiner type apparatus such as that exemplified by Kriebel et al, modified as necessary to include an alternative distributor design as exemplified in Berggren, to load fibers with calcium carbonate and apply carbon dioxide to the apparatus in order to obtain the benefits of loading fibers with calcium carbonate in the presence of carbon dioxide in a refiner as set forth by Klungness et al.

***The prior art made of record*** and not relied upon is considered pertinent to applicant's disclosure.

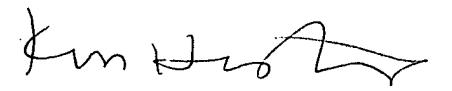
Reinhall et al. is cited of interest showing a refiner with a central ejection wing 41. Reinhall '233 shows a refiner with outer blades/wings 25 serving to discharge/distribute material into a refiner.

***Any inquiry concerning this communication*** or earlier communications from the examiner should be directed to Examiner Hastings whose telephone number is (703) 308-0470. The examiner can normally be reached on Monday through Thursday from 6:30 A.M. to 5 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Steve Griffin, can be reached on (703) 308-1164. The fax phone number for this Group is (703) 305-7115.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0651.

  
Karen M. Hastings  
Senior Primary Examiner  
Art Unit 1731

KMH/cdc  
September 20, 2002

9/02